

MARCH, 1967
VOL. 20, NO. 9



The Bull Sheet

Official Bulletin

Midwest Association of Golf Course Superintendents



**APRIL MEETING
THE INDIAN LAKES
COUNTRY CLUB
BLOOMINGDALE, ILLINOIS
MONDAY, APRIL 10, 1967**

— DINNER —

— BUSINESS MEETING —

— GOLF - WE HOPE —

THE BULL SHEET, official publication of THE MIDWEST ASSOCIATION OF GOLF COURSE SUPERINTENDENTS.

DOUG JABAAY, Editor
P. O. Box 305
Naperville, Ill. 60540

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The President's Message

Purdue University
Lafayette, Indiana

The Midwest Regional Turf Conference has just concluded and a few statistics are available. Attendance this year exceeded 670, a new record high. However, membership in the Midwest Turf Foundation totals only 350. Why do only half of those attending the educational sessions think enough of Purdue's research facilities to join and support the Foundation?

Our Midwest Association can claim only 35 Foundation members. We had less than 50 superintendents present at the Purdue Conference this week. By comparison, the Northern Ohio group, resplendent in their green blazers, had almost their entire membership present at Lafayette.

When I attended the Purdue field day with the late Franklin Kahn a few years ago, we found only two Midwest superintendents present: Al Johnson and Warren Bidwell. At the last field day, I met Norm Kramer and Ted Woehrle on the turf plots.

I know you will argue, we have our own State to support now. Our loyalty is to Dr. Jack Butler, the Illinois Turf Foundation, and the University at Champaign-Urbana. Is it?

The figures will attest that our attendance at Urbana is deplorable. Furthermore, we have only 40 Midwest members in the Illinois Turf Foundation.

My point, gentlemen, is let's not be hypocrites. If our association was organized for educational purposes, then let's support our university research programs. If we want the schools to give us: a hybrid **Poa Annua** that will grow the year round, control for **Pythium** disease, a bluegrass that will survive short mowing, preventative measures to stop winter damage, and better herbicides than we already enjoy, then we must show more interest in their research.

I'm afraid our needs, as golf course superintendents, are being overlooked in favor of the sod growers and the commercial turf man's desires. Next time they schedule a field day or turf conference, let's fill a carload and be there.

Sincerely,
Dudley Smith
President



Ed Stewart, Superintendent River Forest Country Club.

MARCH MEETING

Ed Stewart was our superintendent and host at the beautiful and gracious River Forest Country Club. Eighty-five members attended.

I'm sure a lot of important and general information passed hands during the cocktail hour. The superb dinner was served promptly at 7:00. Many thanks go to Ed and the River Forest manager, Mr. Jones.

After a short business meeting the educational program was turned over to Ted Woehrle of the educational committee. Ted and his panel, Walter Hoyt, Ray Gerber, Dudley Smith and Paul Voykin, showed 80 slides and commented on past experiences with several different types of winter damage to greens and fairways. Much interest was shown and a lot of conversation about not being able to wait until the next day to take another look at their greens.

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SPRING OBSERVATION

PRICE TRENDS UNCERTAIN

In the spring of 1966, the stock market suddenly started to slide which continued more or less uninterruptedly until December 31st, 1966. Business didn't follow suit until about summer, when it likewise began to recede. The automobile companies, with new models in September and October, couldn't revive the boom in car sales. Suddenly in January 1967, rather unexpectedly, the stock market regained about 50% of its 1966 decline, interest rates weakened and credit eased. These factors together with the reinstatement of the 7% depreciation write-off, should revive spending for capital improvements and housing. Thus, according to the behavior of the stock market, business should show marked improvement by July 1st. If the war is ended soon, all bets are off.

How does this effect the turf industry? Due to the tight money situation, many projects involving schools, parks or golf courses have been shelved or postponed. This has eased the pressure for equipment and supplies noticeably.

Grass seed prices have declined rather sharply in most categories, though not uniformly. The sharpest decline has occurred on Merion Bluegrass and Fescues. In sympathy, other Bluegrasses, Red Top, Bents and Rye Grasses have gone down in prices. The lone exception is Penncross Bent, which is in short supply and double last year's price. Weather conditions at harvest time affecting the size of the crop, usually still control the price of any particular grass or individual strain.

The decline in prices from 1966 is approximately as follows:

Bluegrasses	10% - 33-1/3%
Fescues	33-1/3%
Bents, excepting Penncross	20%
Red Top and Rye grasses	20%

Grass seed is selling at bargain prices in the spring of 1967. It demonstrates the fact that prices can go down as well as up and even during inflation, and the law of supply and demand, which is a basic economic law, has not been repealed.

Plant foods and chemicals have held steady. There has been no change, up or down. Due to the fact that agriculture will be pushed to plant increased acreage for crops, the use of fertilizer in agriculture costs are a big factor, and the labor and trucking will probably expand likewise. Handling and delivery costs are going up instead of down.

New prices on machinery and most equipment announced in the fall of 1966, were up slightly, about 5%. There has been no change or indication of a roll-back. Even our automobile companies confronted with sluggish sales, with one exception, have not resorted to official price cuts though bargaining at the dealer level has probably been intensified. We expect no large scale price adjustment because of wages and other fixed costs, especially taxes.

In the insecticide and fungicide line, arsenicals have advanced in price, otherwise there is general price stability.

Irrigation equipment was marked up in price in the fall of 1966 due to the high price of copper. Copper prices have now eased, so there should be no cause for further price increase.

(Continued on page 5)

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TIME FOR PARTING

Whenever I approach the end of a journey my emotions are one of mixed feelings! Glad to be at my destination and happy to have completed a safe and enjoyable trip. This is somewhat my sentiment now. With this issue I will tender my resignation as Editor of the Bull Sheet, and I will also be accepting the challenge of being the new Superintendent at Woodmar Country Club of Hammond, Ind.

I would like to thank you, the members of our association, for the privilege and the honor of serving as your Editor. In the endeavor to bring material of interest to you, the reader, I have had the opportunity to make many new friends as well as renew old friendships. It has been with your help that I have been able to do my job. The pleasure has been mine to serve you. I have gained far more than I have been able to give or ever repay.

I wish to introduce my successor, Tom Burrows, Superintendent of Glencoe Golf Club. A picture and short resume appears in this issue. Good Luck, Tom! May all your copy be based on the best subject material and may all your readers be happy.

Thank you All!
 Sincerely,
 Doug Jabaay



Ed Wollenberg, Superintendent Gary Country Club, and Tom Burrows, Superintendent Glencoe Golf Club.

MEET YOUR DIRECTORS

ED WOLLENBERG

Born on a farm near Olympia Fields C. C. Was employed there from 1928 to 1941 under the late Fred Krueger. After 4½ years in the Air Force went to the Idlewild C. C. as assistant to Mel Warnecke. In 1948 went to Navajo Fields C. C. as Superintendent. Remained there for 11 years, until club was sold for college site and housing development. In October of 1959 went to Gary C. C., Gary, Indiana. Commissioner of Crete Park District, Crete, Illinois for the past 8 years. Married, 3 daughters (2 married) one son. Hobbies — golf, baseball, woodworking.

TOM BURROWS

Entered golf as a caddy and worked four years as an apprentice golf professional at Mount Hawley Country Club, Peoria, Illinois. Worked under Elvy Miller, superintendent at Mt. Hawley C. C. for two years. His encouragement resulted in completion of Turfgrass Management Course at the Penn State University. Apprenticeship continued at the Bob O' Link G. C., Highland Park, Illinois under superintendent Bob Williams for two years, and as assistant to Paul Voykin, superintendent of Briarwood C. C., Deerfield, Illinois. Served in the Illinois National Guard Armor Battalion and was discharged as Staff Sgt. after six years. He has been the superintendent of the Glencoe Golf Club since January 1, 1962. Member of Glencoe Rotary of Rotary International. Hobbies are golf, bowling and reading.

APRIL MEETING

In lieu of the educational program a general discussion will be held regarding Class E Associate Membership in the Midwest Association. All Class E members will be excused from attendance.

SPRING OBSERVATION (Continued)

In summation, in the various categories used by the turf industry, grass seed, down in price rather sharply; plant food, little change; chemicals, no change; machinery and equipment, up slightly, about 5%; insecticides and fungicides, no change except arcenicals; irrigation equipment, slightly higher.

A most critical factor involving prices, is delivery costs. At this writing there is every indication that the truck drivers will go out on strike April 1st. If there is a strike, the trucking industry will have to settle for sharply higher wages and fringe benefits. It behooves the trade to save on trucking costs as much as possible by lumping purchases, refraining from ordering small quantities of merchandise at numerous times. It costs approximately \$5.00 per stop whether by commercial carrier or captive trucks.

C. O. Borgmeier



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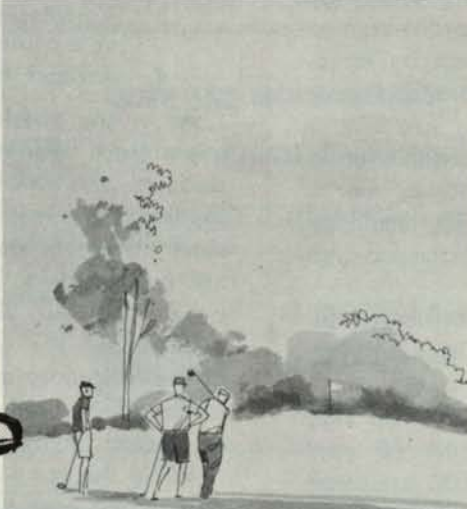
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G. C. S. A. A. Scholarship Award being presented by Norm Kramer to Bill Meyer, son of Tony Meyer, superintendent of Woodridge Country Club.

HISTORY AND PURPOSE OF THE GCSAA SCHOLARSHIP AND RESEARCH FUND

With the phenomenal increase in golf courses in the last fifteen years, the rapidly advancing technology in turf grass maintenance and the vacancies created by the loss of golf course superintendents by retirement or death, the need for many more additional golf course superintendents is obvious.

As early as 1958, this pressing need in golf's future has become so apparent that the Golf Course Superintendents Association of America met this challenge and responsibility by establishing its Scholarship and Research Fund.

To date, over \$86,000.00 has been distributed by this Fund to students and Universities through 166 individual scholarships and 29 research grants.

It is especially interesting and significant to note that, of the \$86,000.00 distributed during the 10 year history of the Fund, more than \$56,000.00 has come from National Golf Day. Last year, for example, the allocation from the proceeds of Golf Day to the Golf Course Superintendents of America Scholarship and Research Fund totaled \$12,600.00. Thus, the individual golfer through his participation in National Golf Day, is sharing an interest in the turf he will be playing on in the future. The balance of the monies distributed by the Scholarship and Research Fund has been contributed by individuals and manufacturers of turf maintenance equipment and supplies.

GCSAA Scholarships have been awarded to both undergraduate and graduate students at 24 of the nation's 50 land grant colleges plus two colleges in

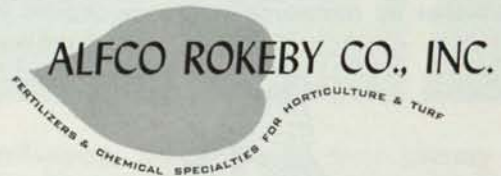
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Canada. The recipients of the scholarships have to meet four basic requirements as outlined by the Board of Directors of the Scholarship and Research Fund, Inc. They are:

1. Scholarship ability
2. Personal character
3. A professed interest in golf turf management as a career
4. A need for financial assistance

As in any scholarship program, no return can be guaranteed. However, approximately 25% of the students who have received GCSAA Scholarships over the past ten years are presently active golf course superintendents and members of the GCSAA. There are no records to show how many other former recipients are also active superintendents although not members of the national Association. The majority of the remainder are working in related fields in turf management with commercial firms, or in teaching or research at the national agronomy centers.

While the Fund has grown steadily since its inception in the amount of monies distributed each year and in the interest generated in young people in adopting golf turf management as a career, much remains to be done to satisfy the very definite need for more and more qualified superintendents each year. For this reason, the Golf Course Superintendents Association of America will increase its efforts to help Golf Day event, in encouraging manufacturers and promote wider participation in the annual National commercial suppliers in the industry to greater and wider contributions, and will continue to seek out new sources of funds for this very worthwhile investment in the future of golf.

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WHY SO MUCH A TON?

By Ed G. Devinger, Turf Chemical Specialist

Do you often wonder why certain types of fertilizer cost so much as compared to other types? There are many different factors which must be taken into consideration in determining the cost of fertilizer.

The greatest cost of any fertilizer is the Nitrogen, Phosphorous, and Potash. The cost will also vary with the types of N-P-K that are used. For instance, when U.F. is added to a fertilizer as another source of Nitrogen, the cost of the product becomes considerably higher. The reason for this is due in part to the cost of U.F. but due mainly to the critical controls that must be maintained during the manufacturing process. These critical controls are: pH, moisture and most of all temperature!

The origin of the materials, N-P-K, have an effect as to the cost of a certain product. Potash is mined primarily in Canada and New Mexico. Phosphorous is mined in Tennessee and Florida. Nitrogen is manufactured at many points around the country from the air and also as a gas by product.

The second greatest cost is in the minor elements which the fertilizer contains. Some minor elements can be added in a combined form, but others must be added separately and alone. This takes time and therefore — cost.

Other factors which enter into the cost of fertilizer, not necessarily in order of importance, are:

- a) Rate of Production, depending on plant facilities. (normal is 20 ton per hour but a fertilizer with U.F. and minor element reduces rate of production to only 6 tons per hour.)
- b) Size of Product.
- c) Of course, Total N-P-K is important.

Actually, fertilizer is fertilizer, but when cost comes into the picture there are three types of fertilizer.

- 1) Blended.
- 2) Manufactured or Homogenous.
- 3) Manufactured or Homogenous w/minor elements.

The process of manufacturing a homogenous product begins when the materials used in the manufacturing are checked for physical and chemical properties. They must meet minimum requirements as to size, analysis and moisture.

They are then very accurately weighed and mixed together at the mixing mill. If it were going to be a blend, it would go directly from the mixing mill to the bagging area. If it is to be a homogenous product, the liquids including Amonia are then added. It then goes on to the granulizing section.

At this point, the critical controls, pH moisture and temperature are watched very carefully as not to destroy the analysis or granular size of the product. It then enters the dryer to remove excess moisture. The temperature again must be controlled to prevent high temperature which would destroy the desired analysis. Now it enters the cooler. After it has been cooled to a desired temperature, it is screened and bagged. Of course, fertilizer by the bulk is cheaper than bagged fertilizer. There are three reasons for the difference in price.

- 1) Cost of Bags
- 2) Less handling
- 3) Easier to ship bulk than bag.

In the screening, all undersized or oversized particles are recycled back to the mixing point. The problem here is that with any products containing U.F., the recycling must be held to a minimum. This is another reason for the cost of fertilizer containing U.F. There is some waste.

During the complete manufacturing process, tests are continually run to make sure that the proper chemical and physical properties are maintained including moisture analysis including minor elements; pH, CWIN, screen size and the A.I. The A.I. or Activity Index is the rate at which CWIN (cold water insoluble nitrogen) is available.

Formulas are being continually researched and developed by research stations and Universities to meet the needs of Superintendents. Naturally, the higher the analysis, the less of the product that will have to be used to get a desired amount of N per 100 sq. ft., the less that will have to be stored and the less fertilizer there will be to handle.

This is how fertilizer is produced and what factors determine the cost of fertilizer.



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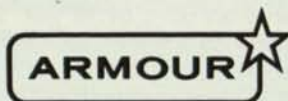
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PROGRESS REPORT

Ben Warren

About six years ago our company made the decision to undertake the task of looking for better turf-grasses. Shortly after this program got underway the Midwest Association was kind enough to ask us to discuss this new program at the fall clinic. It would seem in order to present a report at this time of progress and lack of progress that has occurred in the span of 5 years.

This work is divided in two general categories. One is that of finding variants or aberrants that differ from the parent strain. The second division is that of evaluating these variants.

Search for Variability

Our search for variable material has gone in several directions. Much time has been spent in walking fairways of older golf courses and cemeteries, taking small plugs of any grass that seems to be different from the surrounding grass. Courses have been surveyed in Illinois, Missouri, Kentucky, Ohio, New York, Connecticut, and Rhode Island. Another source of candidates for evaluation have been seedlings from different sources. These sources have been seed lots from many parts of the world, standard varieties which had been treated to induce mutation, seed from known sexual strains, and second and third generation of promising experimental strains which have been both self pollinated and crossed with other strains. These plugs and seedlings are space planted as individual plants.

Evaluation

The spaced plants are planted 30 inches apart and allowed to develop into individual turf patches maintained by conventional mowing, fertilizing, and watering. These are observed for about 3 years. During this period any selections displaying superior characteristics are increased vegetatively into plots 3' x 18'. These plots are subjected to two mowing heights and three fertility levels. After two years the superior strains of these lots are increased to plots of 60 to 70 sq. yds. for material to place in our out field plots. Today we have such plots in New York, Indiana, Missouri, Illinois, and California which are under constant surveillance by our own people for disease activity and general performance. In addition several of our most promising strains have been supplied to Experimental Stations from coast to coast for evaluation in their plot work.

Pathological Work

From the start of this work we had felt that the most important aspect of selection was accurate and rapid determination of the disease relationship of new strain.

In 1961 we were fortunate in obtaining the services of Dr. Timothy Gaskin whose training in Pathology and Genetic was a significant factor in the progress we have made. Tim did considerable work in crossing, irradiation, technique of flower induction, evaluation of chemical damage and inhibition and disease inoculation. We have several drawers full of seed yet to be evaluated that are the result of his work. The remark made earlier in this discussion regarding lack of progress referred to our efforts to develop practical techniques to induce disease under artificial conditions. We have not been as successful here as we would like and must still rely on natural conditions for reliable information.

The major portion of our work has been with the strains of Kentucky Blue Grass however, minor effort has been expended with fine leaved and tall Fescues, and with Creeping Bent. We have collected 25 vegetative bents which are under observation.

Results to Date

There have been black days in these past years but for the most part our results are encouraging. It has become apparent that Kentucky Bluegrass strains can be found that are capable of good performance under cultural practices which are departures from the environment that has been considered necessary for the well being of the species. One selection that has been outstanding in test plots at St. Louis for four years, seems to demonstrate that this latitude that has been poorly served by turf grasses in the past may expect more from which to choose. Another strain has come through with good marks in shady areas. Probably the most interesting to golfing are those selections which tolerate rather low mowing heights. We have some 6 or 7 selections that are maintaining good density and appearance after several years of mowing 1/2 inch and under. Because there are several to choose from one hesitates to commit to commercial production until the disease weaknesses have been evaluated as thoroughly as possible.

It is very unlikely that we will ever have a variety that is resistant to all of the known parasites but a strain about which our enthusiasm continues to grow has been free of four of our major Blue Grass diseases under a wide range of environmental conditions.

We are beginning to develop a time pattern and estimates of anticipated results. From 10,000 seedlings started in the greenhouse this year we may expect 10 to 20 selections worthy of going into initial plots two years later. From 100 such plots after two years observation at rate of 5 to 10 surviving to go into additional broad scale testing seems to be the normal. If one of these after 3 to 4 years merits limited commercial production we feel the effort has been justified.

It is not work for the impatient man.

Some of the more or less basic research projects we have undertaken are: Determination of light and temperature conditions necessary for induction of flowering of Blue Grass chromosome counts of Blue grass, degree of gamma and x-ray irradiation necessary to induce mutation, isolation and identification of pathogenic fungi, general response of desired grasses to herbicides, techniques of artificial induction of grass diseases. We are currently investigating the possible application of the technique of collodion leaf prints to identification of varietal aberrants.

It has been an interesting five years and it is hoped that the next five will be the same as well as rewarding to ourselves and to turf grass in general.

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